

PATENT COOPERATION TREATY


- 4 JUL 2006

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 63305A		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/US2005/009764		International filing date (day/month/year) 24.03.2005	Priority date (day/month/year) 02.04.2004	
International Patent Classification (IPC) or national classification and IPC INV. C08L63/00				
Applicant DOW GLOBAL TECHNOLOGIES INC. et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 5 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 09.11.2005		Date of completion of this report 28.06.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Ellrich, K Telephone No. +49 89 2399-8295		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2005/009764

Box No. I Basis of the report

1. With regard to the **language**, this report is based on

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-15 as originally filed

Claims, Numbers

1-13, 21(part), 22-25 received on 09.11.2005 with letter of 09.11.2005
14-20, 21(part) received on 26.04.2006 with letter of 24.03.2006

Drawings, Sheets

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☒ the claims, Nos. 1-17 as far as mixtures of epoxy vinyl esters and unsaturated polyesters are concerned
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has, within the applicable time limit:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest and, where applicable, the protest fee.
 - ☐ paid additional fees under protest but the applicable protest fee was not paid.
 - ☐ neither restricted the claims nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☒ complied with.
 - ☐ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-17
	No: Claims	18-25
Inventive step (IS)	Yes: Claims	1-17
	No: Claims	18-25
Industrial applicability (IA)	Yes: Claims	1-25
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

Re ITEM I

The originally filed document related to compositions containing a thermosettable resin selected from (A) epoxy resins, (B) epoxy vinyl ester resins, (C) unsaturated polyester resins and mixtures thereof (unspecified).

Amended claim 1 now includes the particular mixture (B)/(C) for which selection there is no basis in the document as filed.

Re ITEM IV

In view of the novelty analysis below (item V) there is no longer a common inventive concept linking the subject-matter of claims 1-17 (mixtures (B) or (C) with amphiphilic copolymers and that of claims 18-25 (coating compositions containing mixtures of (A) with amphiphilic copolymers).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document/s/:

- D1: M.A.HILLMAYER ET.AL.: J. AM. CHEM. SOC., vol. 119, 1997, pages 2749-2750, XP002332060
- D2: P.M.LIPIC ET AL.: J.AM.CHEM.SOC., vol. 120, 1998, pages 8963-8970, XP002332061
- D3: US-A-4 902 732 (ITOH ET AL) 20 February 1990 (1990-02-20)
- D4: WO 2004/108826 A (DOW GLOBAL TECHNOLOGIES INC; UNIVERSITY OF MINNESOTA; BATES, FRANK, S;) 16 December 2004 (2004-12-16)

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 18-25 is not new in the sense of Article 33(2) PCT.

D1 discloses epoxy resins containing an amphiphilic block copolymer (PEO-PEE or PEO-PEP).

D2 discloses epoxy resins containing an amphiphilic block copolymer (PEO-PEP), cf. abstract.

D3 discloses epoxy encapsulating resins containing an amphiphilic block copolymer (claim 1, Col. 4, l. 12-15). *The siloxane-copolymers have hydrophilic groups (-OH; -COOH; -NH₂) and hydrophobic groups (siloxane), thus should be regarded as amphiphilic.*

The epoxy resin as well as the copolymer may be regarded as polymeric binder as well. Consequently, the amendments made could not overcome the raised objections.

Consequently, D1 to D3 anticipate the subject-matter of claims 18-25.

Re Item VI:

D4 discloses epoxy resins containing an amphiphilic block copolymer (PEO-PEP), claims 1-7 and will be relevant for present claims 18-25 in the national phases.